

WHAT IS CLAIMED IS:

1. A backup power device for an elevator, comprising:

a brake including an upper brake controller and a manual brake rod;

5 a damping assembly including a lever spaced apart from a top peripheral portion and coupled to the manual brake rod, the lever having a fulcrum, a roller at one end of the lever, and a wheel having a plurality of alternate recesses and risers equally spaced apart around its periphery;

a motor including a shaft extended outwardly through the brake and the sheave to rotatably couple to the wheel, the shaft being controlled by the brake
10 controller;

a sheave having a traveling cable run through, the sheave and the traveling cable being operative to rotate as the shaft rotates;

an electro-magnetic controller having a control rod;

a pulley having a rope run through the manual brake rod and the control
15 rod to extend downward;

an electro-magnetic brake actuator on top of the brake controller; and

a backup power supply; wherein

the brake controller will activate automatically to brake the shaft in case of the failure of the elevator, the backup power supply will be enabled to supply
20 power to the electro-magnetic brake actuator for activation, the brake controller, as driven by the electro-magnetic brake actuator, will operate intermittently to cause the brake to brake and release the shaft again in intervals, and the shaft will rotate slowly to hoist or lower a car of the elevator until a bottom of the car is flush with a proximate floor of a building;

25 the electro-magnetic controller, as powered by the backup power supply, will activate automatically in case of the failure of the electro-magnetic brake actuator, the electro-magnetic controller will brake and release the control rod

again in intervals, the rope will be driven to pull the manual brake rod to cause the brake controller to activate the brake, the brake will brake and release the shaft again in intervals, and the shaft will rotate slowly to hoist or lower the car until the bottom of the car is flush with the proximate floor of the building; or

5 a passenger trapped in the car can pull down the rope in case of the failure of the electro-magnetic controller, the electro-magnetic brake actuator, and the backup power supply, the manual brake rod is lowered, the lever will turn about the fulcrum to cause the roller to contact the recess or the riser, the wheel turns as the shaft rotates slowly, the roller will rotate and move laterally, intermittently
10 as the alternate recesses and risers rotate, the lever will turn about the fulcrum to cause the manual brake rod to move intermittently to activate the brake controller for causing the brake to brake and release the shaft again in intervals, and the shaft will rotate slowly to hoist or lower the car until the bottom of the car is flush with the proximate floor of the building.

15 2. The backup power device of claim 1, wherein the backup power supply is one of a rechargeable battery, an uninterruptible power supply (UPS), and an alternator.